

# The Perception of Construction Professionals to the Use of Quantity Surveying Research in Nigeria

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## Abstract

The Nigerian construction industry shows little interest in the contributions of research because they see it as theoretical and not suitable for the challenges facing them. Hence, this study assesses the use of research in quantity surveying and challenges that may be confronting its use. Primary data were collected through structured questionnaire from construction professionals who are academics and practitioners in southwestern, Nigeria. Secondary data obtained from a study undertaken on quantity surveyors' perception about quantity surveying research (QSR), was used for comparison. Percentage and frequency distribution, mean item score and descriptive analysis was employed. The study revealed that quantity surveyors claimed that the level of use of quantity surveying research (QSR) is low while other professionals agreed that it is high though the level of awareness and level of accessibility is high from both view points. Quantity surveyors perceived that poor recordkeeping, inadequate funding for QSR, non-readiness of practitioners to support researcher, and absence of collaboration/interaction between academics and practitioners are challenges confronting the use of QSR. The study recommends that academics should work together with the practitioners in the construction industry to receive fund to carry out problem-solving collaborative research which would be useful for them.

**Keywords:** Construction professional, Nigeria, Quantity Surveying Research, Use, Challenges

## 1.0 Introduction

The construction industry everywhere faces problems and challenges which are present alongside a general situation of socio-economic stress, chronic resource shortages, institutional weaknesses and a general inability to deal with the key issues (Ofori, 2001). Research is needed as an original investigation undertaken in order to contribute to knowledge and solve these challenges. This is in line with the opinion of Hampson and Brandon (2004) that the contribution of academic research to the development of the construction industry is immense as it helps to enhance the effectiveness of construction organizations and raise their international competitiveness through technological advances and managerial developments. Nevertheless, research is often not undertaken in the construction industry, as opined by Harris (1992) that construction is one of the least researched. The premise that industry plays a key role in identifying the needs to bring realism to research led to its utilization problemsresearch is facing in the industry. In general view, the industry appear to want guidance from research that clearly tells them what to do in order to achieve greater profitability, greater efficiency (doing things better) and, to some extent, greater effectiveness (doing better things). Over the last decade, there has been much debate in academic research circles bemoaning the fact that management practitioners are not using the academic research being produced in universities and these debates focused on the research rigour and relevance debate and on the need for new forms of social organization for the production of management knowledge encapsulating concerns about the structure of business schools, the nature of management education and the conduct of research, despite this debate and the clamour for increased relevance, the amount of funding that academics are attracting directly from business is continuing to decline (Worrall, Lubbe and Klopper, 2007). Those in industry want straightforward guidance, but inhabit a complex socially constructed world. As a result, they are often disappointed with the contribution of research, either because it is too theoretical or because the simple solutions suggested do not work (Barrett and Barrett, 2003).

Furthermore, Canen and Williamson (1998) posits that companies were unaware of the work that had been published in the academic sector and even when told that research was available, companies showed little interest in its existence. In the case of the construction industry, Abudayyeh, De-young and Jaselskis (2004) opined that the rate at which research is increasing throughout the world is of high and there should be changes in topics to address current to continue to improve in a positive way. University/firm proximity is associated with increased collaboration and that collaborative relationships promote firm utilization of university research (Tornquist and Hoenack, 1996). Quantity surveying profession, defined by the Royal Institution of Chartered Surveyors RICS (1998), is the profession concerned with ensuring that the resources of the construction industry are utilized to the best advantage of society by providing, amongst others, the financial management for projects and a cost consultancy service to both clients and contractors during the whole construction process. In today's world, technological development, economic uncertainties, globalisation and the need for continuous improvement create the need for professionals to constantly update their knowledge base and skills set (NIQS, 2012). The pragmatic nature of research requires that its produces urgent solutionsby working closely with practitioners in order to enhance industry practice (Barrett, 2007). Recently, Ajobiewe, Awodele and Ogunsemi

(2015) examined the perspective of quantity surveyors on the prospects and drawbacks of quantity surveying academic research in the Nigerian Universities but no research has been conducted in assessing the perceptions of allied professionals on the use of quantity surveying research in Nigerian construction industry. Hence, this research seeks to assess the challenges facing the use of quantity surveying research in the construction industry to determine ways to improve it.

## 2.0 Literature Review

### 2.1 Overview of the Nigerian Construction Industry

Construction is one of the largest industries in Nigeria. The construction industry embraces a wide range of loosely integrated organisations that collectively construct, alter, refurbish and repair a wide range of different building and civil engineering structures. The industry has certain unique characteristics, stemming mainly from the physical nature of the construction product and its demand (Balchin, 1994). Oladapo (2015) sees the construction industry as crucial in the economy and in a national development without the provision of basic infrastructure, a network of good communication system, rail and road network for movement of goods and people, water supply, housing and urban development. Isa and Rahtz (2013) observed that the construction industry contributes between 3% and 6% from independence to the 80's before contributing to about over 25% the last decades. Therefore, considering the significant position of the industry in the nation's economy, there is need for improved efficiency, productivity, administration and management of construction activities with adequate solutions to the setbacks and problems confronting the industry (Ogunsemi and Ojo, 2005). The Nigerian Construction Industry is dominated by a few large expatriate firms who carry out about 90% of the work and there are many small Nigerian contracting firms which account for the rest of the work (Oladapo, 2015). However, there are prevalent problems in construction industry which hindered the performance and productivity in Nigeria. Also, Ogunsemi and Ojo (2005) opined that the construction industry occupies a focal position in the economy of any nation because it is an important contributor to the process of development, as a result, construction has a strong linkage with many economic activities, and whatever happens to the industry influence other industries and ultimately the wealth of the country.

### 2.2 Quantity Surveying and the Quantity Surveyor

Quantity surveying was succinctly defined by the Royal Institution of Chartered Surveyors (RICS) as the profession concerned with ensuring that the resources of the construction industry are utilized to the best advantage of society by providing, amongst others, the financial management for projects and a cost consultancy service to both clients and contractors during the whole construction process (Ashworth and Hogg, 2007). There would be no need for economists if resources were adequate to meet all competing needs. This statement is true for individuals, organizations and even nations of the world. In other words, because resources are scarce relative to the demand for them, individuals, organisation, and even nations of the world must optimize their use by judiciously deploying them amongst competing needs. Similarly, the Quantity Surveying profession exists to ensure the judicious allocation of the construction resources of materials, manpower, machinery, money, methods and management with the overriding aim of ensuring value for money spent on construction projects (Kadiri and Ayodele, 2013). Quantity surveying, according to Oyediran (2011), is knowledge based profession and firms operate as knowledge based firms and that professional acquires and accumulates valuable knowledge or capability.

A quantity surveyor is a professional who attempts to ensure the resources of the construction industry are utilized to the best advantage by providing the financial management and consultancy service to the client during the construction process (RICS 1991). Also, Senaratne and Sabesan (2008) describes a quantity surveyor as one who ensures that the resources of the construction industry are utilized to the best advantages of society by providing, *inter alia*, the financial management for projects and cost consultancy services to the client and designer during the whole construction process. But a quantity surveyor is a professional in the construction industry who has the ability to analyze both cost components and practical physical construction works of a project in a successful way so as to be able to apply the results of his analysis in solving problems peculiar to each project (Badu and Amoah, 2004 as cited in Said, Shafiei and Omran, 2010).

### 2.3 Other Construction Professionals

According to Greenhalgh (1997), the essence of the word professionalism can be defined as the possession and autonomous control of a body of specialized knowledge, which when combined with honorific status, confers power upon its holders. Professionalism can also be defined as a profession involving the exercising of body of unique, expert and knowledge and professionals have always been linked with the notion of service so that a profession is described as a group of people organised to serve a body of specialized knowledge in the interests of society based on the perceived relationship (Appelbaum and Lawton, 1990).

Architect: An architect according to Olatunji, Oke and Owofe (2014), is a professional who is

involved in the planning, designing and oversight of a building's construction. In other words, an architect is a person who translates the user's needs into the builder's requirements. He/ She must thoroughly understand the building and operational codes under which his or her design must conform. That degree of knowledge is necessary so that he or she is not apt to omit any necessary requirements, or produce improper, conflicting, ambiguous, or confusing requirements. Oloyede, (2008) sees an architect as a person who directly communicates with the client and that he is the first professionals who is contacted by the client for the translation of his desires or need into drawings and specification. Architect must understand the various methods available to the builder for building the client's structure so as to realistically negotiate with the client to produce a best possible compromise of the results desired within explicit cost and time boundaries.

**Civil Engineer:** Civil engineering involves planning and execution of the designs from transportation, site development, and hydraulic environmental, structural and geotechnical engineers (Raabe and Beehr, 2003). According to Oke, (2013), construction engineers have a lot of responsibilities in their job. Certain tasks have to be completed everyday in order to get the job done correctly. Analyzing reports is a main part of their job description. Engineers must analyze maps, drawings, blueprints, aerial photography and other topographical information. Engineers have to calculate load and grade requirements, liquid flow rates and material stress points to ensure that the structure can withstand stress. In addition to safety, the construction engineer has to make sure that the site stays clean and sanitary. Surveying the land before construction begins is also a job of the construction engineer. They have to make sure that there are no impediments in the way of where the structure will be built and if there are any they must move them. They also must estimate costs and keep the project under budget. Construction engineers have to test the soils and materials used for adequate strength. Finally, construction engineers have to provide construction information, including repairs and cost changes, to the managers.

**Builder:** A professional builder is an academically trained specialist and statutorily registered professional responsible for building production management, construction and maintenance of buildings for the use and protection of mankind and his assets (Olatunji, Oke and Owoeye, 2014). In 1967 some thoughtful and caring Nigerian overseas-trained professional builders organized themselves into a professional association which later became the first overseas centre of the Institute of Building (Later known as The Chartered Institute of Building), United Kingdom. The Nigerian Centre of the Institute of Building became autonomous on November 5, 1970 and from then acquired the name "The Nigerian Institute of Building (NIOB)". NIOB is a professional institute in Nigeria for persons engaged in Building practice in a managerial, technical or administrative capacity in the development, construction and maintenance of buildings, including those who are engaged in academic research and teaching. NIOB is also the professional home for today's managers in construction in Nigeria and was recognized through the promulgation of Decree 45 of 1989 (now known as the ACT CAP 40 of the Laws of the Federal Republic of Nigeria of 1990) (Raabe and Beehr, 2003).

#### 2.4 *Research and Quantity Surveying Research*

According to Rusk (2006), research is defined as a point of view, an attitude of inquiry or a frame of mind which asks questions which have hitherto not been asked, and seeks to answer them by following a fairly definite procedure. It is not a mere theorising, but rather an attempt to elicit facts and to face them once they have been assembled. When successful, research adds to the scientific knowledge of the subject. Singh (2006) reiterates that research simply seeks the answer of certain questions which have not been answered so far and the answers depend upon human efforts. Cook (2006) has given a very comprehensive and functional definition of the term research, which is an honest exhaustive, intelligent searching for facts and their meanings or implications with reference to a given problem. The product or findings of a given piece of research should be an authentic, verifiable and contribution to knowledge in the field studied. Academic research according to the explanation made by Dawson (2002), is an applied research done to solve specific, practical questions; for policy formulation, administration and understanding of a phenomenon. As posits by Hughes (2010), Ajobiwe et. al. (2015) defines academic research in quantity surveying as an *umbrella term* for applied research, carried out by academics, relating to the different skills and competencies in quantity surveying.

#### 2.5 *Success Factors of Construction Research and Development*

The contribution of academic research to the development of the construction industry is immense as it helps to enhance the effectiveness of construction organizations and raise their international competitiveness through technological advances and managerial developments (Hampson and Brandon, 2004). In terms of the construction research base, Fairclough (2002,) raises the following questions; 'is the construction research base in a fit state to tackle the most critical issues of the 21st century? Does it have the right people, the right organisation, or the right vision? Does it have the right skills?' Lack of skilled people in construction research & development organizations has resulted in inadequate support for ongoing research & development activities and a reduction in the absorption capacity to implement good practices developed in other

organizations/disciplines. Similarly to Fairclough (2002), Conceicao and Heitor (2002) assert the need for skilled employees to implement the good ideas. Skilled people therefore can be identified as one of the success factors for construction research & development.

### 2.6 *Interface between industry and Research Use: The Challenges*

According to the European Communities (2007), the need for sharing knowledge between research institutions and industry has become increasingly evident in recent years. Historically, research institutions were perceived as a source of new ideas and industry offered a natural route to maximising the use of these ideas. However, the past decade has seen a significant change in the roles of both parties. Many companies are developing open innovation approaches to research and development, combining in-house and external resources, and aiming to maximize economic value from their intellectual property, even when it is not directly linked to their core business. Also, Harris (1992) pointed out that construction is one of the least researched and it has taken a long time for people to realize that construction is not just the labourers who are on the job site performing the actual construction, but that it also includes many professionals who focus on research and development to discover new technologies and materials that improve the methods and processes of construction, by these it all begins with educational programs that mold talented new engineers who are capable of research. Worrall et al (2007) sees the utilization problem as one of the major gaps of research relevance. Existing literature on disseminating research, pointed out some challenges, which are the knowledge base on effective dissemination and implementation of research findings is still poor, research on its own is insufficient; development and implementation need to follow dissemination, we can learn much from techniques in changing professional behaviour from other services notably health, implementing research is a two-way process practitioners need to be able to get information when they need it, and they need to be in a position to influence the research agenda and the end point user needs to be recognized as a powerful force in demanding the best of what works (Rowntree, 2008).

Ajobiewe *et. al.* (2015) identifies some challenges as factors affecting the use of quantity surveying research in Nigeria. The factors, which includes poor record keeping of QS research by practitioners, inadequate dissemination/knowledge transfer of QS research outputs, insufficient knowledge officer to communicate new QS ideas, difficulty in content interpretation of QS research by practitioners, absence of collaboration/Interaction between academics & practitioners, inadequate funding for QS research to support researchers, self-approach to developing research problems, duplication of research studies and frittering away of resources, lack of Industry's confidence on the misuse of material and lack of belief in the need for QS research by practitioners (practitioners orientation) are few of the challenges adopted for this study.

## 3.0 **Research Methods**

The paper adopted quantitative and descriptive research methods. Primary data were collected through the questionnaire and interview from construction professionals operating both in the University and the construction industry in Lagos, Ondo and Osun States in Nigeria. The choice of the three states was based on the premise that the population will be too large and that the professionals working in the states where higher institutions offering quantity surveying are located, will have adequate knowledge about the profession and respond to the questions. A total of 219 (two hundred and nineteen) registered professionals who are architects, builders and engineers were selected to gather information on the subject matter. The questionnaire addressed questions based on a 5 point likert scale 131 (one hundred and thirty-one) questionnaire, which represents 60% health response rate, was retrieved and suitable for analysis. The data was analyzed using percentage and mean item score (MIS) while the information from the previous study was analyzed descriptively.

## 4.0 **Results and Discussions**

### 4.1 *Results*

This presents the results which were obtained from the analysis.

The perceptions of construction professionals were obtained on the quantity surveying research (QSR). Table 1 showed that the level of use of QSR is high while allied professionals agreed that that it is slightly high. The information from the previous study revealed that the level of use as agreed by quantity surveyors is low. The implication is that the response from quantity surveyors is authentic because they are presumed to have more knowledge about QSR. Also, all the professionals claimed the level of awareness and level of accessibility is high.

Table 2 shows that all the identified challenges are confronting the use of quantity surveying research (QSR) in the construction industry. The result revealed that other construction professionals agreed that non-readiness of practitioners to support researchers, lack of corporate knowledge that stops the reproduction of the same proposals over time, insufficient knowledge officer to communicate new QS ideas for improvement in industry, same ideas regenerated five to ten years later and absence of collaboration between academia &



practitioners are the challenges most confronting the use of QSR. Quantity surveyors pointed out that the most significant factors affecting the use of QSR includes poor record keeping of quantity surveying research by practitioners, inadequate funding for QS research to support researchers and absence of collaboration/interaction between academics & practitioners. This indicates that the entire construction professional agreed that absence of collaboration/interaction between academics & practitioners is the most significant challenge confronting the use of quantity surveying research.

## Discussions

### Quantity Surveying Research:

The study revealed that all construction professionals, with the exception of the quantity surveyor, are of the opinion that quantity surveying research (QSR) are not been used in the construction because they have no sufficient knowledge about QSR. This is in contrast to the finding of Ajobiewe *et al.* (2015) which posit that QSR are not been used in the construction industry. To Corroborate this, Barrett and Barrett (2003) posited that research produced by academic are been used because they are too theoretical. Furthermore, the study showed that the level of awareness and accessibility is high, which is in line with the finding of the previous study used for comparison.

### Challenges confronting the use of Quantity Surveying Academic Research:

Non-readiness of practitioners to support researchers, lack of corporate knowledge that stops the reproduction of the same proposals over time, insufficient knowledge officer to communicate new QS ideas for improvement in industry, same ideas regenerated five to ten years later and absence of collaboration between academia & practitioners are the challenges most confronting the use of QSR. This is dissimilar to the finding of Ajobiewe *et al.* (2015) in which quantity surveyors asserted that the most significant factors affecting the use of QSR includes poor record keeping of quantity surveying research by practitioners, inadequate funding for QS research to support researchers and absence of collaboration/interaction between academics & practitioners. The finding in this study showed that the entire construction professional agreed that lack of collaboration between academics and practitioners is the most significant challenge confronting the use of QSR. This support the findings of Atzar (2008) and Wilson (2012) that academic researchers and the construction industry practitioners do not collaborate closely because construction practitioners perceived that the academic research is more focused on subjects and issues which are not crucial for the construction industry

## Conclusions

This paper examines the use of quantity surveying research (QSR) and the challenges confronting the use of QSR in the Nigerian construction industry. The findings revealed that the level of awareness and accessibility of QSR is high though the level of use is moderate. Absence of collaboration between academics and practitioners is the challenge most confronting the use of QSR. The study suggests collaborative relationships between the industry and academic so that researchers can receive supports from industry/firm to carrying out useful research for solving immediate problems faced in the Nigerian construction industry.

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## References

- Abudayyeh, O., Dibert-DeYoung, A. & Jaselskis, E. (2004). Analysis of Trends in Construction Research: 1985–2002. *Journal of Construction Engineering and Management*, **130**(3): 433-439.
- Ajobiewe, D. Awodele O. and Ogunsemi D. (2015). Quantity Surveying academic research in Nigerian Universities; Prospects and Drawbacks. *Proceeding of Environmental design and management international conference*. Obafemi Awolowo University, Ile Ife, 9th-12th March.
- Ashworth, A. & Hogg, K. (2007), “*Willis’s practice and procedure for the quantity surveyor*”. (12th ed.). Oxford: Blackwell Science.
- Azhar, S. (2008). Improving Collaboration between Researchers and Practitioners in Construction Research Projects using Action Research Technique. (in Preparation).
- Barrett, B. S & Barrett, L. C (2003). Research as a kaleidoscope on practice. *Construction Management and Economics*, **21**, 755-766.
- Barrett, B. S. (2007). Revaluing Construction: A Holistic Model. *Building Research & Information*, **35**(3), 268-286.
- Canen, A.G. and Williamson, G.H. (1998), “Facility layout overview: towards competitive advantage”, *Facilities*, **16** (7/8), 198-203.
- Dawson, C. (2002). *Practical Research Methods*, New Delhi, UBS Publishers’ Distributors.

*Fairclough (2002, p. 17)*

- Hampson, K. and Brandson, P. (2004). Construction 2020: A vision for Australia's property and construction industry. *CRC Construction Innovation, Brisbane, Australia*.
- Harris, R. B. (1992). A Challenge for Research. *Journal of Construction Engineering Management*, 118 (3), 422-434.
- Kadiri, D. S. & Ayodele, E. M. (2013). Constraints to Quantity Surveying Awareness in Nigeria. *Journal of Civil and Environmental Research*. 3(11), 17-22.
- Nigerian Institute of Quantity Surveyors. (2012). *Research Policy*. Abuja: Nigerian Institute of Quantity Surveyors.
- Ofori, G. (2001). *Challenges of Construction Industries in Developing Countries: Lessons from Various Countries*. Department of Building, National University of Singapore, Singapore 117566.
- Ogunsemi, D. R. & Aje, I. O. (2006). A model for contractors' selection in Nigeria, *Journal of Financial Management of Property and Construction*, 11(1), 33 – 44.
- Oke, A. E. (2013). Project management leadership styles of Nigerian. *International Journal of Construction Project Management*, 5 (2), 159-169.
- Oladapo, I.O. (2015). Problems of Construction Industry in Nigeria. *IABSE Report of Working Commissions*, 140-144.
- Olatunji S. O, Oke, A. E. & Owoeye, L. C. (2014). Factors Affecting Performance of Construction. *International Journal of Engineering and Advanced Technology (IJEAT)*, 3 (6), 76-84.
- Oloyede, P.E. (2008). *Performance: Application, assessment, causes, and consequences*. Msc thesis submitted to University of Ibadan, Nigeria.
- Raabe E and Beehr T. (2003). The changing nature of nurses' job satisfaction: an exploration of sources of satisfaction in the 1990s. *Journal of Advanced Nursing*, 36, 67-75.
- Oyediran, O. S. (2011). *Challenges to efficient service delivery by Quantity Surveyors*. A paper presented at the 2011 Quantity Surveying Assembly and Colloquium held at Shehu Musa Yar'Adua Centre, Abuja, Nigeria on 28th-29th September 2011.
- Royal Institution of Chartered Surveyors (1998). The APC Requirements and Competencies. Royal Institution of Chartered Surveyors, London.
- Senaratne, S. & Sabesan, S. (2008). Managing knowledge as quantity surveyors: An exploratory case study in Sri Lanka. *Built Environment Issues*, 8(2), 1-7.
- Tornquist, K. M. & Hoenack, S. A. (1996). Firm Utilization of University Scientific Research. *Research in Higher Education*, 37 (5), 509-534
- Wilson, T. (2012). A Review of Business–University Collaboration. Report on Higher Education Funding Council for England. 1-82.
- Worrall, L., Lubbe, S. & Klopper, R. (2007). Academic research and management practice: Is the relevance gap closing? London: Chartered Management Institute. *Alteration Report*, 14, 292 – 316.

Level of use, Awareness and Accessibility of Quantity Surveying Research:

**Table 1: Level of use, Awareness and Accessibility**

	Academic MIS	Practitioners MIS
Level of use of research	3.44	3.68
Level of awareness of research	3.84	3.40
Level of accessibility to research	3.50	3.30

Challenges from the Interface of Research in Quantity Surveying and the Construction Industry:

**Table 2: Challenges Confronting Use**

<b>Challenges</b>	<b>Professionals</b>	
	<b>Acad.</b>	<b>Pract.</b>
Non-readiness of practitioners to support researchers.	3.94	3.68
No corporate knowledge that stops the reproduction of the same proposals over time.	3.78	3.83
Absence of collaboration/Interaction between academia & practitioners on QSR.	3.69	3.80
Insufficient knowledge officer/worker to communicate new QS ideas for improvement in industry.	3.78	3.83
Publications propose solutions that are never tested on real industry tests.	3.56	3.78
Same ideas regenerated five to ten years later by other graduate student.	3.56	3.83
Industry does not support hypothesis testing for academic research.	3.47	3.25
QSR is done by graduate students who continually change.	3.41	3.48
Lack of belief in the need for QSR by practitioners.	3.34	3.28
The cycle of traditional research development too short for new concepts to be thoroughly tested.	3.28	3.45
QSR is funded by government grant agencies that are not accountable for producing dominant results.	2.84	2.98